

sequence of symbols on said communication link and a receiver for receiving said information placed on said communication link by said transmitter, said transmitter comprising

a clock for defining successive frames, each said frame comprising M time intervals, where M is an integer greater than 1;

B1 cont.  
a modulator [for] modulating each of M carrier signals with a signal related to the value of one of said symbols thereby generating a modulated carrier signal corresponding to each of said carrier signals that is to be modulated and [for] generating a sum signal comprising a sum of said modulated carrier signals, said modulator comprising a tree-structured array of filter banks having nodes, including a root node and M leaf nodes, each of said values related to said symbols forming an input to a corresponding one of said leaf nodes, each of said nodes, other than said leaf nodes, comprising one of said filter banks; and

an output circuit for transmitting said sum signal on said communication link, wherein said carrier signals comprise first and second carriers, said first carrier having a different bandwidth than said second carrier.

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2. (Twice Amended) The communication system of Claim 1<sup>3</sup> wherein said modulator comprises a tree-structured array of filter banks having nodes, including a root node and M leaf nodes, each of said values related to said symbols forming an input to a corresponding one of said leaf nodes, each of said nodes, other than said leaf nodes, comprising one of said filter banks.

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3. (Amended) The communication system of Claim 1 wherein said receiver comprises;

an input circuit for receiving and storing M time-domain samples transmitted on said communication link; and

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Cont. a decoder for recovering said M symbol values, said decoder comprising a tree-structured array of sub-band filter banks, said received M time-domain samples forming the input of [the] a root node of said tree-structured array of said decoder and said M symbol values being generated by the leaf nodes of said tree-structured array of said decoder, each said sub-band filter bank comprising a plurality of FIR filters having a common input for receiving an input time-domain signal, each said filter generating an output signal representing a symbol value in a corresponding frequency band.

Please add the following claim:

3 A. (New) A communication system for sending a sequence of symbols on a communication link, said communication system comprising a transmitter for placing information indicative of said sequence of symbols on said communication link, said transmitter comprising:

B3 a clock for defining successive frames, each said frame comprising M time intervals, where M is an integer greater than 1;

a modulator [for] modulating each of M carrier signals with a signal related to the value of one of said symbols thereby generating a modulated carrier signal corresponding to each of said carrier signals that is to be modulated and [for] generating a sum signal comprising a sum of said modulated carrier signals;